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convince the members of this section and of our engineering societies of the importance of establishing aeronautical laboratories and courses of instruction in aerial engineering in America, in order to keep pace with their rapid development in Europe. The fundamental researches of our late associates, Langley, the physicist, and Chanute, the engineer, which first demonstrated the principles of dynamic flight, should be an incentive to further scientific work in this country towards its perfection.

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*THE INDEPENDENCE OF THE CULTURE
OF THE AMERICAN INDIAN¹*

IF one considers for a moment a map of the world, the two American continents are seen to possess one obvious characteristic in which the other great land masses do not share—isolation. From the time of the discovery America has been known as the new world, and indeed the name seems well deserved. Europe, Africa and Asia together with Australia and most of the islands of the Pacific form a closely connected and nearly continuous area. Within its limits races have come and gone, civilizations and cultures have risen and passed away, but each has been to some extent directly or indirectly influenced by others, and strong cultures have made their effects felt, albeit but faintly sometimes, to the furthest limits of this old world. A Mongol chieftain once made all Europe tremble; the conquests of a Chinese king perhaps decreed the age-long wanderings of the Polynesians; and the visions of an Arabian epileptic were the cause of movements that have overthrown empires and profoundly influenced the life of men from

the northern rim of Europe to the edge of the South African deserts, and from the Pillars of Hercules to the Spice Islands of the east.

To understand and analyze, therefore, the culture of any given people or portion of the old world, the possible far-reaching effects of other cultures even although remote, must be borne in mind. In this it would seem, however, that America might be excepted. As far back at least as history or tradition goes it has stood alone, touching that other and older world only in the frozen north, and when, at the time of the discovery, Spanish, French and English broke down its barriers of isolation, it was to reveal peoples and cultures which for centuries and perhaps millenniums had been developing their own civilizations apparently untouched, neither influencing nor being influenced by those of the old world.

Yet in spite of the apparent isolation in which the people of America lived, no sooner were they known than various general similarities between them and peoples of the old world were observed, and theory after theory was brought forward attempting to derive them or their culture *en bloc* from elsewhere. Some, mostly of the earlier period, looked to the Semites and the Lost Ten Tribes, others to China and a party of Buddhist monks; others still to the islands of the South Seas or to Egypt and the fabled Atlantis. All such theories, however, it need hardly be said, belong to the period before the present in which more accurate and abundant observation and careful scientific method are employed. In spite of the many such theories exploited, the majority of students refused to accept the conclusions, many indeed going to the opposite extreme. They admitted that the various cultures which, as a result of the activity of investigators, had been

¹ Address of the vice-president and chairman of Section H, Washington, 1911.

gradually outlined in the two Americas had unquestionably influenced one another, but they felt that although all American cultures might thus be in some degree interrelated, they had had no connection with any of the cultures of the old world. The similarities observed were thought to be coincidences due to the effects of similar environment and to the fundamental unity of the human mind. In short, so far as the history of culture was concerned, the new and old worlds formed two closed circles, tangent but not intersecting, within each of which different cultures had modified each other, but between which little or no interaction had taken place since human culture had attained to any real differentiation.

As our knowledge of different cultures both in America and elsewhere has come to be more detailed and their historical relations have become more and more apparent; as the methods of investigation have grown more exact and the criteria of relationship become more defined, the feeling has grown that after all, perhaps, the similarities between old and new world cultures might have a deeper meaning.

I may be permitted perhaps at this point to outline very briefly some of the methods and what seem to me to be some of the most reliable criteria of this so-called historical as opposed to the evolutionary school of anthropology. Such statements must indeed be trite, but will make clearer perhaps my argument further on. In essence the method depends upon the realization of the complexity of culture, that that of any given people is probably made up of elements derived from many sources, and that analysis must therefore precede a clear understanding. The analysis completed, the separate elements must be traced step by step and from tribe to tribe to determine their distribution. This

necessarily involves much careful consideration of apparently insignificant details, close comparison of archeological material with modern forms, the sifting and weighing of historical traditions, and the searching analysis of dialectic and archaic forms of speech. If as a result of such study, similarities are found to exist between different tribes or peoples, this is regarded as evidence of a real historic relationship; either one tribe has borrowed directly or indirectly from the other, or both have felt the influence from a common source.

But in drawing such conclusions we must proceed with caution, and constantly test our conclusions by reference to certain general principles. Perhaps the most obvious of these is the possibility or probability of such relationship on geographic or historical grounds. Thus resemblances between one tribe in South Africa and another in Chile would afford little basis for assuming relationship in their cultures, as from their very wide separation and known history, no reasonable ground exists for assuming any possible connection. On the other hand, similarities between the people on a remote island in eastern Polynesia and others in Assam or southern China may be significant, as there exists a possible route by which cultural influences or even migrations might have taken place, and there is historical evidence of movements of population on a tremendous scale in just this direction.

Another factor of importance is that of continuity of distribution. If striking similarities are observed between two widely separated peoples and no trace appears, either among the living peoples intervening, or from archeological evidence, of any connecting links, and there is no evidence of migrations, we must be cautious in assuming any genetic or historical relationship, and adopt at least as a work-

ing hypothesis that the similarities are due perhaps to convergent evolution, and that the two phenomena are in origin independent. A third point must also be considered in this connection. In tracing cultural influences and relationships, especially over wide areas, it is not to be expected that the implement, custom or belief will remain throughout precisely the same. As we pass from tribe to tribe and from region to region modifications are almost certain to be made, either in accordance with the various tribal or national characteristics and inherited tendencies, or as a result of the varying environment under which the people live; the implement will vary as a result of new uses and materials, the custom or belief will change with the different habit of thought and attitude toward the world of different tribes.

Of great importance again in drawing inferences from the observed similarity between implements or customs in different areas is the character and relative complexity of the things between which the similarity exists. Thus that two widely separated peoples both make use of a simple dug-out canoe is no necessary indication of historical or genetic relationship between them, as this is one of the simplest forms of canoe possible, and one which any two peoples making use of wood as a material must almost inevitably hit upon. If, on the other hand, both peoples make use of a canoe of unusual shape or one which shows some peculiar technical features in its construction or ornamentation, then the possibility or probability of relationship between the two peoples is established and should the peculiarity moreover be known only among these two peoples the evidence would become all the stronger. Further, if the peculiarities are in one case dependent on and in close relation to the environment or necessitated by

it, and in the other they show no such relation or are present only as useless or even detrimental features, the probability that the latter has in some way been derived from the former becomes great. The validity of the evidence for historical or genetic relationship thus is directly proportional to the unusualness or complexity of the things compared, features of very wide distribution or of very simple character being almost worthless for purposes of argument.

Lastly, if an attempt is made not merely to show relationship between single implements, customs or beliefs among different peoples, but to demonstrate a similar relation for an entire group of cultural elements, consideration should be given both to the question of the relative permanence and resistance to change of the different elements separately, and to the relative importance in the respective areas of the group of elements on whose similarities the claim for general cultural relationship is based.

The historical method in anthropological investigation, then, if it is to lead to trustworthy results, requires on the part of the student not only most careful and minute investigation and comparison of the facts themselves, but also the constant consideration of these in the light of their relation in time and space, their continuity, their modifications, their individual character and their relationship to the sum total of the culture of the respective peoples. That enthusiastic adherents of or converts to this historical as opposed to the evolutional school should be led away by their enthusiasm and in so doing neglect to give due weight to these considerations is natural. It is also natural that the conclusions so arrived at should often be striking and almost revolutionary. But although the results may not receive gen-

eral acceptance, and although the theories may even bear upon their face their own refutation, still they may serve a useful purpose. On the one hand they may exemplify the dangers to which the followers of the historical method are exposed, and on the other they may often direct attention to a group of facts whose significance has been overlooked.

Such an over-enthusiastic application of the historical method as regards the question of the independence of the culture of the American Indian is exemplified to my mind in the theory recently advanced of the real and fundamental relationship of American and Melanesian cultures; I refer to that put forward by Dr. Graebner in his "*Die melanesischen Bogenkultur und Verwandtes.*" The conclusions reached by the author of this most striking and painstaking study are, it seems to me, of value in demonstrating both the strength and the weakness of the method. For the ethnology of Melanesia, Polynesia, Micronesia, Indonesia and Australia, together with the adjacent parts of southeastern Asia, Dr. Graebner's work is, I believe, in large measure valuable. It is where, abandoning the comparatively firm ground of Oceanic ethnology in which he is at home, he looks further afield, and finds in America (as indeed also in Asia, Africa and Europe) the evidences of a specific Melanesian culture, that I believe we must hesitate to follow him, and subject his facts and conclusions to careful scrutiny. General principles may often best be illustrated by concrete examples, and it is therefore with the idea of exemplifying some of the principles previously laid down, and not in any spirit of unfriendly criticism, that I propose to analyze and examine that portion of the theory of the Melanesian bow-culture which relates to America.

The theory in general may be summed up as follows. By a detailed analysis of the rather bewildering culture complexes of the closely interrelated peoples of Oceania, the conclusion is reached that a number of distinct cultures may be recognized, each marked by a coherent group of characteristic implements, usages, forms of social organization and beliefs; that these several cultures have spread successively over the region in question, and by their varied intermixture and superposition have produced the great complexity we find to-day. The various elements which go to make up the different cultures are regarded as so intimately interrelated and combined as to be practically inseparable, and as a particular combination to have had a definite origin in time and space. The occurrence of any considerable number of the separate elements of such a group among any given tribe or people is considered as sufficient evidence of the existence of the whole culture complex as an integral and historical feature in its development.

Of the various cultures so outlined and traced throughout Oceania, that of the so-called Melanesian bow-culture is taken up in most detail. The distinguishing characteristics of this culture are described as the self-bow of flat cross-section, arrows with fore-shafts, pile-dwellings, coiled pottery, twilled basketry, spoons, the hammock, paddles with handles at right angles to the shaft, bamboo combs, suspension bridges, the use of betel and tobacco and the pipe, hour-glass drums, communal dwellings, head-hunting and associated skull-cults, and the use of the squatting human figure and the spiral in art and design. Associated always closely with this culture is the two-class matriarchal culture, whose distinguishing features are in part the rectangular house with gable-roof,

plank-canoe, secret societies, masked dances and ancestral cults. Dismissing for the purposes of this enquiry the validity of these groups, and the correctness of the conclusions drawn in regard to their distribution in the Oceanic area, let us very briefly consider the evidence brought forward to prove their presence as fundamental and integral parts of American culture.

Beginning with North America, we find it stated that except for a few forms in the western United States which are of the type of the self-bow with flat cross-section, all other bows north of Mexico are either derivatives of the composite Asiatic or the reflexed, strengthened Arctic bow. Incidentally it may be noted that the statement could hardly have been more incorrect, as with few exceptions it is precisely in the west and on the Pacific coast that the strengthened bow is common, whereas the self-bow of rectangular cross-section is for the greater part of the eastern portion of the country the prevailing type. The presence, however, of the self-bow in North America is given as the first argument for the existence here of the Melanesian culture. It is to be noted, however, that this type of bow is almost the simplest and least elaborated form possible, the only simpler form being that where the stick has been left round in its natural state. Therefore the fact that this simple form of bow, which is in other parts of the world widely distributed, occurs both in America and in Melanesia does not constitute evidence of any historical relation between the two cultures.

For the Melanesian bow-culture in Melanesia, pile-dwellings are given as one of the most important characteristics, and their presence in America is signaled in Florida and on the northwest coast. So far as the first case is concerned, the rather

obvious relationship to similar types in northern South America, and the known Antillean and South American influences which have affected the Floridian peninsula and the adjacent parts of the Gulf shores, are wholly ignored; and to regard the occasional instances of the use of wooden blocks a few inches in height under the foundations of northwest coast houses as traces of pile-dwellings seems to strain the theory of historical relationship to the breaking-point. Pottery of coiled technique is referred to as another link connecting Melanesia and America, but here again little importance can be given to resemblances in such a simple factor, for the coil process is one of the most common methods employed in pottery-making by people the world over where the potter's wheel is not known. Twilled basketry is attributed to the Pueblo and Muskogean tribes, but its possible historical connection in the latter case at least, with Antillean and South American types, and its partial dependence on material, are both overlooked. The use of spoons which, contrary to the author's statements, is very widespread in North America, is a further striking example of an extremely simple implement, not whose peculiar form or decoration, but whose mere existence is regarded as evidence of cultural relation. Similarly without real value and in part erroneous as to fact, are the references to the paddle with handle at right angles to the shaft, and to communal dwellings. Since paddle shafts must either end in some form of cross-handle or be, like a broom-handle, without the cross-grip; and since dwellings must be either communal or not communal, there being no tertium quid, it hardly seems that the presence of one of the only two possible forms in each case should be regarded as evidence of cultural influence or identity.

On the basis of facts such as these which have been given as examples, and without further study or investigation of American cultures themselves, it is assumed that the Melanesian bow-culture may be traced as an essential factor in North American civilizations. In the brief discussion of the several instances given, it is apparent that not only does the writer show too slight an acquaintance with the facts relating to North America, but he violates in every case almost, the principle that the things compared and found similar if they are to prove real relationship, must in themselves possess some distinctive character, and not be simple and widely distributed. Dr. Graebner's theory, moreover, assumes that these elements of Melanesian culture reached America by way of northeastern Asia and Bering Strait, and while this is perhaps not wholly beyond the bounds of possibility geographically, it is contradicted by practically all historical and other evidence and probability. With few exceptions there is no evidence that cultural elements have passed from Asia eastward to America by way of Bering Straits, but on the contrary much evidence has in the last few years been brought forward to show that in fact the reverse has occurred, and that American influences have passed westward into Asia.

For North America, therefore, the case for the Melanesian bow-culture seems extremely weak, and indeed Dr. Graebner himself admits that, as compared with South and Central America, his evidence is scanty. It is necessary thus to examine briefly the argument presented for the presence of this Melanesian culture in the southern continent. At the very outset one is, to say the least, surprised to find in passing that solely from the occurrence of skin cloaks, round huts and coiled basketry, the Fuegians are regarded as repre-

sentatives of the early Australian culture. The willingness here shown to rest conclusions of far-reaching import on foundations of such extremely tenuous nature, can not fail, it seems to me, to lead us to look with some distrust at the author's other conclusions, and to accept them only with great caution.

Turning, however, to the Melanesian bow-culture, the area where this makes itself most strongly felt is said to be the northern and northwestern part of the continent. Here the self-bow of flat cross-section is the prevailing type; here in Guiana, Venezuela and Colombia the pile-dwelling is found; and here pottery (simply as such) is said to reach its highest development. In respect to the latter, a further instance is given of the author's incomplete acquaintance with the field with which he is dealing, in that the distribution given for pottery as "south as far as the Gran Chaco" wholly ignores the well-known fact of its extension to central Chile and far into Patagonia. Simple twilled basketry which is well-nigh universal throughout the northern two thirds of the continent is again brought forward as evidence of Melanesian influence, as is the use of tobacco and the pipe, the hammock and the paddle with cross-handle. Other elements noted are communal houses, head-hunting and skull-cults, and the use of the squatting human figure and the spiral in art. Associated with the Melanesian bow-culture in Melanesia itself is the so-called two-class matriarchal culture, and elements belonging to it, in the form of masked dances, knobbed clubs, plank canoes, pan-pipes and signal-drums are found also in South America. The fact that the chief center for all these elements of Melanesian culture lies in the northern and northwestern part of the continent suggests, says Dr. Graebner, their intrusion from Cen-

tral America and Mexico, where indeed he proceeds to show their presence.

In respect to most of the evidence thus brought forward for South and Central America, the same criticisms may be made as in the case of North America, and in many instances with added force. Here, as there, the mutual relations of the various cultures within the area are largely overlooked, and such well-established facts as that of the northward dispersal and migrations of the Carib and Tupi tribes are completely ignored. The propriety also of assuming that a feature so characteristic and widely distributed in South and Central America as the hammock has been introduced there from Melanesia where its occurrence is, on the contrary, extremely rare, seems rather questionable.

One of the strongest arguments against the validity of the Melanesian bow-culture theory as outlined by Dr. Graebner is, however, furnished curiously by the author himself, in the very abundance of the evidence and the closeness of the similarities which he claims for South America. The essence of the theory is that this Melanesian culture has, as a coordinated and intimately connected group of elements, been transmitted as a unit to the southern continent by way of eastern and north-eastern Asia, Bering Straits and North America. Now as the theory has not the temerity to assert the actual migration of Melanesian peoples from Melanesia through Asia and North America to the southern continent, it follows that the spread of the culture-complex must have been in the nature of a slow transmission from tribe to tribe, each in turn receiving the various elements, and incorporating them into the fundamental structure of its culture, before transmitting them to the next. That any such heterogeneous and not inherently related group of cultural

elements could survive unchanged transmission through scores of different tribes belonging to several distinct races; passing through the whole gamut of varied environments from the tropics to the Arctic circle and back again to the tropics; such transmission lasting necessarily over a period which must be reckoned in centuries or thousands of years; this is an assumption which is not merely beyond reasonable probability but is contradicted by almost all historical and ethnological evidence. It is to deny absolutely the well demonstrated fact that cultural elements when borrowed are subject to far-reaching and often fundamental modifications in accordance with the peculiar psychological characteristics of the borrowers and the environment in which they live; it is to assume that not even in the case of such absolutely elementary and natural things as the use of the skins of animals as protection against the weather, or of a spoon or a communal dwelling, could these have been developed independently and without historical relation; it is, in spite of Dr. Graebner's disclaimer, to throw aside the hard-learned lessons of the past two or three decades derived from the study of mythology, and to revert to the standards of a previous generation, and assume that similarities, whatever their nature and wherever they may be found, can only be explained as due to a common origin.

If then we must, as I believe, regard the theory proposed by Dr. Graebner of the presence of a Melanesian bow-culture in America as in no sense demonstrated, as fundamentally false in method and as exemplifying the most extreme position in the revolt against the theories of independent development, it does not follow that it must be barren of results. Indeed, its value lies, it seems to me, in the fact that it calls serious attention to the existence of

a really remarkable series of parallelisms between certain elements of American and Oceanic cultures, some of the more important of which, however, to my mind, the theory as proposed fails to note. That such parallels existed has for years been known, but hitherto little systematic attempt has been made to gather or explain them. The obvious suggestion has of course been made that they were the result of culture contacts along the Pacific Coast, of Oceanic with American peoples, but beyond this, little has been done. In part this has no doubt been due to the fact that most investigators have felt that our knowledge, particularly in regard to South America and much of Oceania itself, was still too incomplete to make a detailed study of the question profitable. Although I share in this feeling, I may perhaps be permitted in closing to point out a few of the facts which seem to me of special significance, and to urge the need of very thorough investigation of the whole field.

To my mind the most striking and for the purposes of tracing cultural relations, perhaps most important elements in common between the Oceanic area and America are, the true plank canoe, the use of a masticatory with lime, head-hunting and associated skull-cults, the blow-gun, throwing-stick, the hammock and perhaps the institution of the men's-house and certain peculiar masked dances and forms of masks in use in Papuan Melanesia and in America only in parts of Brazil. Of these the first three are either wholly confined to or reach their highest development on the Pacific coasts of both American continents, and the last three (with the exception perhaps of the men's-house) together with the third and fourth are confined to northwestern and northern South America and the immediately adjacent parts of Central America, with, in

the case of the blow-gun, such parts of North America as have been influenced by Carib and Arawak cultures. Compared with the self-bow, the use of coiled pottery, twilled basketry, the spoon, paddle with cross-handle and the communal dwellings of the Melanesian bow-culture, these are for the most part far from being simple affairs, and occur, moreover, with few exceptions, only in America and Oceania together with the adjacent parts of southern Asia. Six at least of the elements (the plank canoe, use of a masticatory with lime, head-hunting and skull-cults, blow-gun, men's-house and peculiar form of mask and masked dances) may be said to be in varying degrees exotic in American culture, in that their distribution is limited and that they are in contrast to the usual and prevailing American types. Four at least (the plank canoe, use of a masticatory with lime, head-hunting and skull-cults and the institution of the men's-house) are on the other hand of very wide and continuous distribution in Melanesia, Indonesia and southeastern Asia. To this list of cultural coincidences may be added among others the curious and ingenious process of polychrome dyeing known in Indonesia as Ikat, and which occurs except for the region of Indonesia and adjacent southeastern Asia nowhere else, so far as known, but in Peru.

In any attempt at explanation of these facts, the strong concentration of the elements in America on the Pacific coast and in the western portions of the two continents, and their almost total absence in the eastern parts, seems of considerable importance. In this connection the as yet only fragmentary evidences of early migrations in South America from the Pacific coast eastward into the Orinoco-Amazon area must not be lost sight of. From this distribution, the explanation

which most readily suggests itself is of course the old one of direct contact along the Pacific coast. Elements of material culture might well be adopted thus as a result of the chance drifting ashore of a canoe with a handful of survivors, or even without these, from the region to the west; and the sporadic character of the occurrence of such features as the plank canoe, known only in Chile and on the coast of southern California, might thus naturally be explained. The difficulty, however, in attempting to explain the whole problem in this way lies in the fact that it is not with the migratory and sea-roving Polynesians that the cultural coincidences are strongest, but rather with the Papuan (as opposed to the Melanesian) tribes of New Guinea and with the older cultures of Indonesia. The Papuan tribes are not, so far as we know, a markedly seafaring people, and so far no evidence of their actual presence east of the 180° meridian has come to light. The people of Indonesia also, among whom the resemblances are found, although far more capable navigators, have nevertheless left no certain traces of their presence to the eastward of the Moluccas and the western end of New Guinea. Moreover, the Polynesians could hardly have served as the intermediaries through whom these elements were transmitted, as they themselves show, except for the plank canoe, little trace of them. Unless, then, strong evidence should come to light of an earlier more easterly extension of Papuan and Indonesian peoples, or some explanation be offered for the almost complete absence of the features in question among the Polynesians, the solution of the problem by supposing a direct transmission across the Pacific seems barred by the facts of geographic position and history. A similar result seems also to appear if the attempt is made to trace the elements

by way of the Asiatic and North American littoral. Thus in the present state of our knowledge, neither by way of the long, circuitous route through Asia, Bering Straits and Alaska, nor by the more direct route across the Pacific can we satisfactorily account for the series of striking coincidences in culture between western America and particularly western South America, and Oceania with the neighboring parts of southeastern Asia.

Such a negative conclusion or verdict of "not proven" is generally most unsatisfactory. In the present case, the coincidences are so striking, in both character and distribution, that we are almost forced to believe in some sort of historical connection. But I believe we should for the present continue to be cautious. The possibility of independent development must not be denied even in the case of these quite peculiar features, nor need the fact that only a portion of the American peoples showing coincidences live in similar tropical or semi-tropical environment be regarded as a serious objection to this hypothesis.

To revert again to my title, I believe that in the present state of our information, we must still regard American Indian culture as in all its essentials and in most of its details, as of independent growth, uninfluenced by the cultures of the old world, and recognize that its geographical isolation has in fact proved to be a cultural isolation also, and that although certain curious coincidences undoubtedly exist with parts of Oceania and southeastern Asia, no historical relationship between the cultures of the two widely separated regions can as yet be said to have been established. That with increasing knowledge historical relations may indeed be shown seems to me wholly possible, but its demonstration must rest

upon that fuller knowledge of fact and of the historic sequence of cultures in the respective areas, and on the practise of the general principles of evidence some of which I have here attempted to set forth and illustrate.

Anthropologists are at present, as was recently pointed out by Dr. Rivers in his address as vice-president of the section in the British Association, in the unfortunate condition of not agreeing on fundamental questions of method. We have, it is hoped, left behind us the period of vague and futile theorizing without facts or with too few facts, but there are still many who believe that evolution is the master-key which will unlock all doors, and that by the amassing of more or less heterogeneous and unrelated facts from all over the world a continuous development through definite stages of culture may everywhere be shown. The partizans of independent development based on the theory of the psychological unity of the human mind, are set over against those who believe in the complexity of cultures, and the possibility that by analysis and comparison their historic relationships may be determined, and who would explain similarities in culture between widely separated peoples on this basis or on that of convergent evolution. Here in America we have come to feel, I think, more perhaps than elsewhere, that no one of these theories is a panacea. As a result of the experience of the last decade or so in attempting to outline and define the several culture areas in this continent, we are beginning to realize that these several points of view may all and at the same time be true, and to admit that in a given culture, whereas some elements are undoubtedly the outcome of contact or transmission, others may be the result of evolutionary development, and dependent on the general uni-

formity of reaction to similar stimuli among mankind as a whole; and we are prepared, I trust, to agree that if fact and theory do not conform, it is the latter for which the Procrustean bed should be reserved.

It is in this spirit, then, of insistence on abundant fact and its careful interpretation, without prejudice and unencumbered with rigid theories which will admit of no compromise, that I believe we should approach the question of the independence of American culture; a question which has its greatest interest quite naturally for us in America, but which for anthropology as a whole is also of great and far-reaching importance.

ROLAND B. DIXON

*THE PERCENTAGE OF WOMEN TEACHERS
IN STATE COLLEGES AND
UNIVERSITIES¹*

THE average per cent. of women teachers for all the state colleges and universities is 9+. The average for the schools west of the Mississippi is 13+ per cent., while for the schools east of the Mississippi it is 6+ per cent.

Eleven schools,² which were selected at random, have 149 women teachers. Of these 149, 10+ per cent. are full professors, 5+ per cent. are associate professors, 10+ per cent. are assistant professors and 73+ per cent. instructors.

As to the subjects these 149 women teach, the distribution is: professors, home econom-

¹ These figures base upon "Statistics of State Universities and other Institutions of Higher Education Partially Supported by the State," for the year ended June, 1910 (Washington, Government Printing Office), and catalogues of eleven institutions for the year 1910.

² The eleven schools are: University of Arizona, Iowa State College, Miami University, University of Montana, University of New Mexico, North Dakota Agricultural College, Ohio University, University of Oklahoma, University of South Dakota, University of Utah, University of Wyoming.